CHEM 4328 Advanced Topics Organic Chem:  
(Analytical Techniques for Forensic Science)  
SPRING 2024

CRN: 27019  
Lecture time: 10:30-11:50 AM, Tue & Thu  
Location: Classroom C301 (& Zoom)  
Office Hours: TBA  
Instructor: XiuJun James Li, Ph.D., Director of Forensic Science  
Professor of Chemistry and Biomedical Engineering  
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- Certificate in College Instruction for Effective Teaching by the American Council on Education (ACE) and Association of College and University Educators (ACUE)

Online Teaching (some portions):  
1. Synchronous Teaching: Zoom:  
   Join Zoom Meeting  
   https://utep-edu.zoom.us/j/87551903015?pwd=MFFScCtOWFVXYnZKUWpEZGZmTU9EQT09  
   Meeting ID: 875 5190 3015  
   Passcode: gna64k5E  
2. Asynchronous Teaching: Pre-recorded video.  
3. We may also use App REEF Polling for in-class activities.  
   Search ""

COURSE Description  
Prerequisites: General Chemistry CHEM 1305 or CHEM 1307. Co-requisite: none. Recommended: CHEM 3310

Forensic Chemistry involves the application of analytical chemistry to physical evidence in the practice of forensic science. This course is designed to introduce forensic chemistry that applies chemical principles, methods, and instrumentation in the analysis of physical evidence for forensics. In addition, the course may cover major topics that are most commonly applicable to the everyday functions of a crime laboratory professional.

STUDENT LEARNING OUTCOMES:  
- Understand fundamentals of chemical methods and basic instrumental methods used in forensic analysis.  
- Apply learnt chemical methods and instrumental analysis methods to analyze physical evidence for forensics.
TEXTBOOK AND OTHER STUDY MATERIAL


COURSE CONTENT OUTLINE

- Introduction of Forensic Chemistry
- Statistics, Quality assurance, Quality control
- Spectroscopy UV-VIS and its application
- Spectroscopy FT-IR and its application
- Fluorescence spectroscopy and its application
- Mass Spectrometry
- Gas/liquid chromatography
- Forensic drug analysis
- Forensic analysis of explosives
- Elemental analysis

EXAMS

- Two “Unit exams” and one final exam will be offered during the course of the semester. The final examination will be comprehensive.

Evaluations:

- Attendance 5%
- In-class work, quizzes 5%
- Homework 5%
- Projects (Presentations/paper) 10%
- Unit Exam 1-2* 35%
- Exam 3 (final, comprehensive) 40%

Final Grade*: 100%

Breakdown*: 100% - 89% - 79% - 69% - 59% - 0%

A B C D F

*: There are two unit tests. You may remove the lowest one while keeping the highest one. This is to increase your overall score.
Make-up exams including quizzes etc will NOT be given. Please consider carefully the repercussions of making other commitments that coincide with exam days and class time. When the final overall average from all students is too low or too high, the final grades might be slightly adjusted.

Absence:
Doctor note can be accepted for the absence of class to avoid the absence penalty (5%). However, make-up exams will NOT be given. Please consider carefully the repercussions of making other commitments that coincide with exam days.

Important dates:
1. Week 6 (02/18-) Exam 1 (Tentative)
2. 03/11-15/2024 Spring Break
3. Week 11 (03/25-) Exam 2 (Tentative)
4. 03/28/20224 Spring Drop/Withdrawal Deadline
5. 05/02/2024 (week 16) Final Exam

Academic honesty:
Materials (written or otherwise) submitted to fulfill academic requirements must represent a student’s own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, disclosure of exam questions, and collusion. Violations will be taken seriously and will be referred to the Dean of Students Office, and the Office of Student Conduct and Conflict Resolution (https://www.utep.edu/student-affairs/osccr/) for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

Guidance on Artificial Intelligence
The use of generative AI tools such as Chat GPT is permitted in this course for the following activities, which must be noted or cited:
• Language correction
• Grammar check
However, you may not use AI tools to complete the following activities:
Write a part or the entire assignment, find ideas or anything that is not mentioned above.
Students must cite any borrowed content sources to comply with all applicable citation guidelines, copyright law, and avoid plagiarism. Instances that violate these guidelines will be referred to the Office of Student Conduct and Conflict Resolution.

PLAGIARISM DETECTING SOFTWARE
Some of your course work and assessments may submitted to SafeAssign, a plagiarism
detecting software. SafeAssign is used to review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

**Students with Disabilities**

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Office of disabled Student Services located in Union E Room 203. Students who have been designated as disabled must reactivate their standing with the Office of Disabled Student Services on a yearly basis. Failure to report to this office will place a student on the inactive list and nullify benefits received. If you have a condition which may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of Disabled Student Services. You may call 747-5148 for general information about the Americans with Disabilities Act (ADA).

All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to one month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

**COVID-19 PRECAUTION STATEMENT**

We need to follow CDC, El Paso, and UTEP’s regulations to ensure high safety.

*Syllabus is subject to change. Any changes will be announced in class, or by email, or posted on the course Blackboard site during the semester. Students are solely responsible for getting the most updated information.*